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10/829,608	04/22/2004	Greta Light	15436.373.1	6846

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EXAMINER	
LEUNG, CHRISTINA Y	
ART UNIT	**PAPER NUMBER**
2633	

DATE MAILED: 02/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/829,608	LIGHT, GRETA	
	Examiner	Art Unit	
	Christina Y. Leung	2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☒ Claim(s) *6* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *08 December 2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 6 is objected to because of the following informalities:

Claim 6 recites "defined by defined" in line 13 of the claim. Examiner respectfully notes that the second instance of the word "defined" should be removed for grammatical reasons.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 5, 12 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Giboney et al. (US 6,318,909 B1).

Regarding claim 1, Giboney et al. disclose an optical device (Figures 1A, 1B, and 5) comprising:

a housing (including cover assembly 52; column 5, lines 29-31; Figures 6A and 6B also shows more extensive housing 81);

at least one optical subassembly (including optical communications device 32 and fibers 71) substantially disposed within the housing and defining a longitudinal axis; and

a substrate (circuit board 25) substantially disposed within the housing and residing in a plane that is substantially perpendicular to the longitudinal axis defined by the at least one

optical subassembly (Figure 1A, for example, shows how the surface of board 25 is perpendicular to fibers 71), the substrate including electronic circuitry 36.

Regarding claim 2, Giboney et al. disclose that the at least one optical subassembly comprises at least one of: a transmit optical subassembly and a receive optical subassembly (column 5, lines 8-11).

Regarding claim 3, Giboney et al. disclose that the substrate includes a connector 44 in electrical communication with at least some of the electronic circuitry of the substrate (column 9-29).

Regarding claim 5, Giboney et al. disclose that the at least one optical subassembly 32 is mechanically and electrically connected to the substrate 25 (column 7, lines 51-67; column 8, lines 1-2).

Regarding claim 12, Giboney et al. disclose an optical transceiver (Figures 1A, 1B, and 5) comprising:

a housing (including cover assembly 52; column 5, lines 29-31; Figures 6A and 6B also shows more extensive housing 81);

a transmit optical subassembly (including the optical transmitting elements of optical communications device 32 and the ones of fibers 71 connected thereto; column 5, lines 8-11) substantially disposed within the housing and defining a longitudinal axis (i.e., the axis parallel to the fibers);

a receive optical subassembly (including the optical receiving elements of optical communications device 32 and the respectively connected fibers 71) substantially disposed within the housing and defining a longitudinal axis; and

a transceiver substrate (circuit board 25) substantially disposed within the housing and residing in a plane that is substantially perpendicular to the longitudinal axes respectively defined by the transmit optical subassembly and the receive optical subassembly (Figure 1A, for example, shows how the surface of board 25 is perpendicular to fibers 71), the transceiver substrate including electronic circuitry 36, and the transceiver substrate being physically and electrically connected to the transmit optical subassembly and the receive optical subassembly (column 7, lines 51-67; column 8, lines 1-2).

Regarding claim 16, Giboney et al. disclose that the transceiver substrate 25 defines front and rear sides, portions of the electronic circuitry being disposed on both the front and rear sides of the transceiver substrate. Figure 1A shows electronic circuit 36 on one side of substrate 25, while Figure 1E shows notches 41 for exposing parts of the other side of the substrate. Although additional circuitry is not explicitly shown on this side of the substrate in the figure, Giboney et al. disclose placing such circuitry there (column 9, lines 46-54).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 4, 6-11, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Giboney et al. in view of qLogic ("SANblade: 2-Gbps Fibre Channel to PCI Express Host Bus Adapter," dated 09/03 by qLogic Corporation).

Regarding claims 4, 14, and 15, Gibonery et al. disclose a system as discussed above with regard to claims 1, 3, and 12. Giboney et al. further disclose that the substrate 25 includes a connector 44 configured to interface with a mother board 47 (column 10, lines 12-26), but they do not specifically disclose that the mother board may be a host bus adapter or PCI card. However, qLogic teaches a host bus adapter that is a PCI card including an optical transceiver such as already disclosed by Giboney et al. Regarding claims 4, 14, and 15, it would have been obvious to a person of ordinary skill in the art to use the host bus adapter/PCI card taught by qLogic with the transceiver disclosed by Giboney et al. in order to enable the optical transceiver to be readily installed in a host using standardized physical slots.

Regarding claim 6, Giboney et al. disclose an optoelectronic interface device suitable for use in implementing an optical connection to a host device (Figures 1A, 1B, 1F, and 5), comprising:

a printed circuit board (motherboard 47) connected for electrically interfacing with the host device (column 10, lines 12-26); and

an optical transceiver configured to mechanically and electrically interface with the printed circuit board 47 and comprising:

a housing (including cover assembly 52; column 5, lines 29-31; Figures 6A and 6B also shows more extensive housing 81);

a transmit optical subassembly and a receive optical subassembly (fibers 71 and optical communications device 32, which include transmitters and receivers; column 5, lines 8-11) substantially disposed within the housing, each of which defines a corresponding longitudinal axis; and

a transceiver substrate 25 substantially disposed within the housing and residing in a plane that is substantially perpendicular to the longitudinal axes respectively defined by defined the transmit optical subassembly and the receive optical subassembly, the transceiver substrate including electronic circuitry 36.

Giboney et al. disclose that mother board 47 includes a printed circuit board that interfaces with other systems (i.e., a host device), but they do not specifically disclose that it is a host bus adapter having at least one connector for electrically interfacing with a host device. However, qLogic teaches a host bus adapter, including an optical transceiver such as already disclosed by Giboney et al. qLogic further teaches that the host bus adapter has a printed circuit board and at least one connector (i.e., an array of pins on the board) for electrically interfacing with a host device.

Further regarding claims 7 and 8 in particular, qLogic further teaches a host bus adapter that is configured to be substantially received within a standard PCI card slot of the host device (see third item under "Features" on page 1)

Regarding claims 9, 10, and 11, qLogic further teaches a host bus adapter comprising a printed circuit board for a peripheral component interconnect (PCI) card, further comprising a face plate defining cutouts and being attached, at least indirectly, to at least one of a optical transceiver and, the host bus adapter (see Figure on page 1), and wherein the faceplate includes at least one status indicator (see eighth item under "Features" on page 1).

Regarding claims 6-11, it would have been obvious to a person of ordinary skill in the art to use the host bus adapter taught by qLogic with the transceiver disclosed by Giboney et al. in

order to enable the optical transceiver to be readily installed in a host using standardized physical slots and also in order to provide status indicators to monitor the operation of the transceiver.

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Giboney et al. in view of Dwarkin et al. (US 6,454,470 B1).

Regarding claim 13, Giboney et al. disclose a system as discussed above with regard to claim 12, but they do not specifically disclose data rates at least 10 Gbps. However, Dwarkin et al. teach optical transceivers that are used in connection with 10 Gbps data rates (column 1, lines 43-44). It would have been obvious to a person of ordinary skill in the art to use optical transceiver elements suitable for 10 Gbps data rates as taught by Dwarkin et al. in the system disclosed by Giboney et al. in order to transmit data more efficiently.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christina Y. Leung whose telephone number is 571-272-3023. The examiner can normally be reached on Monday to Friday, 6:30 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 571-272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Christina Y Leung

Christina Y Leung
Patent Examiner
Art Unit 2633